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AM0NN-A

AMMETER, DC

1. GENERAL. This procurement requires a dc milliammeter equipped with a clip-on probe.

2. CLASSIFICATION. The equipment shall be Type II, Class 5, Style E, and Color R for Navy applications in accordance with MIL-T-28800.

3. MEASUREMENT MODE. The equipment shall be capable of measuring current in accordance with the ranges, accuracies, and sensitivities specified below. The indicating meter shall have a mirror-backed scale and a measurement resolution of 0.02 mA or less on the 1 mA range.

3.1 Direct current. Direct current measuring capability shall be provided for selectable, full-scale ranges of 1 mA or less to at least 10A.

3.1.1 DC accuracy. The dc accuracy shall be within ±3% full scale of ±0.15 mA.

3.2 In-circuit loading. The probe shall be insulated for a minimum of 300V (dc + peak ac), providing dc isolation from the circuit being measured. Probe inductance shall be 0.5 H or less and shall induce no more than a 15 mV peak signal to the circuit under test.

3.3 Output mode. The equipment shall be provided with a front-panel output voltage proportional to measured current.

3.3.1 Output noise. The output noise measured across a 1 kilohm load shall be less than 15 mV on the 1 mA range, 5 mV on the 2 mA range, and 2 mV on ranges of 10 mA and greater.

3.4 Probe. The equipment shall include a clamp-on transducer probe capable of measuring current in conductors that have a diameter of 4 mm (5/32 in) or less.

4. POWER. The equipment shall be powered in accordance with the nominal power requirements of MIL-T-28800 except operation from 400 Hz and 230V is not required. The maximum power required for operation shall not exceed 75W.

5. CALIBRATION INTERVAL. The calibration interval shall be 12-months minimum. The equipment model shall be within all accuracy requirements specified herein, with a 72% or greater confidence factor following a calibration interval of 12 months.

6. DIMENSIONS AND WEIGHT. The size and weight of the equipment shall be consistent with current commercial capabilities and shall not exceed the maximum dimensions for shipboard applications specified in MIL-T-28800. The weight shall not exceed 20 kg (44 lb).